Kroy Building Products

North Carolina Manufacturing Extension Partnership

Kroy Building Products Optimizes Space With Efficient Flow And Sufficient Storage

Client Profile:
Kroy Building Products, Inc. produces a full line of vinyl material to make virtually any style of fence or railing. Its products have the color molded in--there is no need for painting. This feature is especially useful for outdoor applications. Kroy Building Products employs approximately 80 people at its Fair Bluff, North Carolina facility.

Situation:
Kroy Building Product (Kroy)'s facility encompassed a total of 250,000 square feet, of which approximately 180,000 square feet needed facility analysis and rearrangement. The company wanted to produce a new wood/PVC composite product, but needed to find a way to accommodate additional machinery and workers within the existing facility. For such a large facility re-layout, Kroy requested assistance from the Industrial Extension Service at North Carolina State University (IES), a NIST MEP network affiliate.

Solution:
IES agreed to help Kroy optimize its available space, ensure efficient material flow, and find ample storage space. In preparation for this project, IES hired an NCSU engineering graduate student to work with an IES specialist for industrial engineering and ergonomics.
Together, the IES specialist and his gradate assistant conducted an existing facility layout baseline analysis by creating AutoCAD drawings of existing equipment, input/output access, material storage, people, and workflow paths. Using these drawings, the team developed a space utilization spreadsheet of allocations for workstations, people, equipment, access, storage, and aisles. They also produced a material and logistical flow analysis table showing existing travel distances for major product categories.
Next, the IES team created an optimized facility layout and additional capacity analysis. The analysis included AutoCAD drawings of optimal locations for equipment, input/output access, material storage, people, and workflow paths. It also revised the space utilization worksheet and flow analysis to demonstrate ideal spatial allocations for people, equipment, materials, and logistical flow.
Once Kroy implemented the recommendations that rolled out of IES's analyses, it found plenty of space to set-up its new product line.

Results:
Improved workflow efficiency.
Optimized space utilization.
Increased revenues due to increased output capacity.
Saving $120,000 annually.

Testimonial:
"North Carolina State University's Industrial Extension Service successfully provided technical assistance to help us maintain our economic stability and our capability to increase jobs in North Carolina."
Larry Gates, Plant Manager